

REMARKS

In the Office Action the Examiner objected to claim 4 for insufficient antecedent basis and rejected claims and rejected claims 1-3, 7, 10-14, 17-22 25, 26, 28, 30, 31, 36, 44, and 45 under 35 U.S.C. 103 for being obvious, objected to claims 25, 34, and 36 for informalities, and objected to claims 8 and 9 as being dependent on a rejected base claim but otherwise allowable. Claims 11-3, 7, 10-14, 17-22 25, 26, 28, 30, 31, 36, 44, and 45 remain in the application.

Claims 8 and 9 have been amended to independent claims in the manner indicated as allowable.

Claims 25, 34, and 36 have been amended to address the objections of the Examiner.

The rejection for obviousness of claim 1 was based on Krishnan and Koizumi. The Examiner used Krishnan as the primary reference for teaching most of the elements of applicants' claim 1 and the Koizumi for the remainder. Krishnan teaches a germanium implant to amorphize the source/drain regions followed by a source/drain implant of p-type dopant, which is known to be boron. The boron implant does not perfectly align with the amorphized region but extends somewhat past it. This is shown in FIG. 3G of Krishnan in which the boron implant regions 305 and 308 are shown extending beyond the amorphized regions 304 and 307. A major point of Krishnan is the low temperature anneal that achieves activation of the source/drain implant. Krishnan characterizes this at column 3, lines 27-32 as, "The low temperature anneal is performed at a temperature that is high enough to recrystallize amorphous regions 304 and 307 through the solid phase epitaxial growth of substrate 301, but low enough to prevent activation of portions of the inactive dopant regions 305 and 308 that are outside the amorphous regions." The unmistakable teaching is that if the activation of the germanium implant to recrystallize the source/drain regions occurred prior to the boron implant, then the activation of the boron implant would require a higher temperature than is required when the activation of the boron is coincident with the recrystallization. Another way of characterizing Krishnan's teaching is that it requires a higher temperature to activate the boron implant if recrystallization has already occurred. Thus, it is contrary to the teaching of Krishnan to activate the germanium implant prior to the activation of the boron. Accordingly, applicants submit that it is improper to conclude that it is obvious to change Krishnan in a way that actually contradicts the teaching of Krishnan and that claim 1 is patentably distinct from the cited art.

Claim 36 claims increasing the lattice constant and boron doping that occurs after the increasing the lattice constant. Since Krishnan teaches that the region implanted with Ge is amorphous, there is no lattice and thus no lattice constant in the region of the germanium implant at the time of Krishnan's boron implant. Claim 44 states, "the implanting the boron is performed subsequent to the activating the germanium." Thus for the reasons with regard to claim 1, applicants submit that the remaining independent claims are patentably distinct from the cited references. Further the other dependent claims deserve a different analysis in light of this.

The Office Action contains numerous statements characterizing the claims, the Specification, and the prior art. Regardless of whether such statements are addressed by Applicant, Applicant refuses to subscribe to any of these statements, unless expressly indicated by Applicant.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

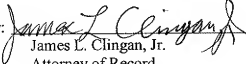
Applicants believe the application is in condition for allowance which action is respectfully solicited. Please contact the below-signed if there are any issues regarding this communication or otherwise concerning the current application.

Respectfully submitted,

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